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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/936,182 09/24/97 KITAGISHI

N 1232-4046US1

EXAMINER

MMC2/1219

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ART UNIT

PAPER NUMBER

2872

DATE MAILED:

12/19/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/936/182

Applicant(s)

KITAGISHI

Examiner

R.D. SHAFER

Group Art Unit

2872

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 10/16/00
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 36-105 is/are pending in the application.
- Of the above claim(s) 57-70 AND 92-105 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 36-56, 71, 78 AND 85 is/are rejected.
- ☒ Claim(s) 72-77, 79-84 AND 86-91 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. Applicant's request for a CPA, filed on 10/16/00, is acknowledged. Since the CPA did not contain an indication that a shift in election is desired the prosecution is being continued on the species (Fig. 9) elected and prosecuted by applicant in the prior application. Accordingly, claims 57-70 and 92-105 are withdrawn from consideration as being directed to a non-elected species.

2. Claims 43-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 43, line 13, the use of the language "a light" is vague, indefinite and/or confusing. The above mentioned language lacks proper nexus with respect to the light recited in claim 43, line 4.

In claim 50, line 7, the language "a polarizing element" lacks proper nexus with respect to claim 36. The Examiner suggests changing "element" to read --device--.

Applicant should note that claims 63-70 and 92-105 are replete with 35 U.S.C. 112, 2nd paragraph issues, such as improper antecedent basis, and/or improper multiple dependent claim wording. In order to expedite the prosecution of this application, the Examiner invites applicant to correct the above mentioned deficiencies of claims 63-70 and 92-105 in response to this office action.

3. Claims 39^{and} 41, 46 and 48, 53 and 55, 60 and 62, 74 and 76, 81 and 83, and 88 and 90 are objected to because of the following in formalities: The above mentioned combination of

claims are considered to be identical due to the alternative language of the claims. Appropriate correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36, 43, 71, ~~78~~ and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicia et al ('588).

Nicia et al discloses a polarizing device (8) comprising a prism (11) having a polarizing beam splitting surface (10) on one surface and a reflection surface on the other surface, a half wavelength plate (12) and prism means (9), note fig. 2, except for the prism being a "plate". It would have been obvious and/or within the level of one ^{of} ordinary skill in the art at the time the invention was made to modify the shape of the prism of Nicia et al to include a plate as is well known and commonly used and employed in the optical art.

Moreover, since applicant has not disclosed that a plate solves any stated problem or is for any particular purpose, it appears that the invention would perform equally well with a prism.

Note In re Dailey et al, 149 USPQ 47 and In re Kuhle, 188 USPQ 7.

As to the limitations that light is incident on said plate (prism) from said one surface side, it would have been obvious and/or within the level of one having ordinary skill in the art at the time the invention was made to arrange the light of Nicia et al to be incident on said one surface

side of said plate (prism) through said prism means (9), since it has been held that ^{rearranging} parts of an invention involves only routine skill in the art. Note In re Gazda, 104 USPQ 400.

5. Claims 36-42 and 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geffcken et al ('060).

Re D S Geffcken et al discloses an polarizing device comprising a transparent plate (P) having a polarizing beam splitting surface (36) on one surface and a reflection surface (46a) on the other surface and a $\lambda/2$ phase plate (38) which obviously serves as a "half wavelength plate". Note by example only, Figure 17 and plage 5, lines 32-114.

Re D S However, if this is not the case, it certainly would have been obvious to one of ordinary skill in the art at the time invention was made to modify the $\lambda/2$ phase plate of Geffcken et al to include a half wavelength plate, since applicant has not disclosed that the half wavelength plate solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the $\lambda/2$ phase plate or the $\lambda/2$ phase plate in combination with the reflection surface. Note In re Kuhle, 188 USPQ 7. Moreover, applicant's claim 92 clearly contends that light passing twice through a quarter wavelength plate is a functional equivalent to a half wavelength plate in order to rotate a polarizing direction by 90 degrees.

As to the limitations of claims 37, 38, 51 and 52, Geffcken et al clearly teaches it is well known to use a cylindrical lens array or a fly eye lens in the same field of endeavor for the purpose of making a plurality of light beams incident on an polarizing device.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time the invention was made to modify the polarizing device of Geffcken et al,

not depicted by Fig. 17 to include a lens array ^{shown} in figures 8 and 9 in order to obtain a plurality of input/output beams.

As to the limitations of claim 39-42 and 53-56, it is well known to use an image generator in the same field of endeavor or analogous art for the purpose of modulating polarized light to generate an image light.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time invention was made to modify the polarizing device of Geffcken et al to include an image generator as is well known in the optical art in order to modulate polarized light to generate an image light.

6. Claims 72-77, 79-84 and 86-91 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 44-49 are would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the image generator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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Art Unit: 2872

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9. Any inquiry concerning this communication should be directed to R. D. Shafer at telephone number (703) 308-4813.

Shafer/nt

12-6-00

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ART UNIT 2872